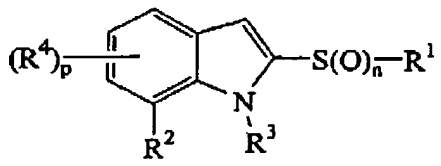
Claim Listing

1. (Previously Presented) A compound of the formula:



or a pharmaceutically acceptable salt thereof,

wherein

n is 0, 1 or 2;

p is 1 or 2;

R^1 is aryl;

R^2 is a heterocyclyl;

R^3 is hydrogen, alkyl, or $-C(=O)-R^5$, where R^5 is alkyl, alkoxy, aryl, or aryloxy; and

each R^4 is independently hydrogen, hydroxy, cyano, alkyl, alkoxy, thioalkyl, alkylthio, halo, haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, alkylcarbonyl, alkylsulfonyl, arylsulfonyl, haloalkylsulfonyl, amino, alkylamino, dialkylamino, alkyl(aryl)amino, alkylaminocarbonyl, alkylcarbonylamino, alkylcarbonyl(alkylamino), alkylaminosulfonyl, alkylsulfonylamino or methylenedioxyhydrogen, alkyl, alkoxy, halo, or haloalkyl.

2. (Original) The compound according to Claim 1, wherein p is 1 and R^4 is located at the 6-position of the indole ring system.

3. (Original) The compound according to Claim 1, wherein R^2 is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.

4. (Original) The compound according to Claim 3, wherein R^2 is piperazin-1-yl, 4-methylpiperazin-1-yl, 3,5-dimethylpiperazin-1-yl, N-methyl piperidin-4-yl or piperidin-4-yl.

5. (Original) The compound according to Claim 4, wherein R^2 is 4-methylpiperazin-1-yl.

6. (Previously Presented) The compound according to Claim 3, wherein R^1 is optionally substituted phenyl.

7. (Previously Presented) The compound according to Claim 6, wherein R^1 is phenyl which is optionally substituted with alkyl, halo or haloalkyl.

8. (Previously Presented) The compound according to Claim 7, wherein R^1 is phenyl, 2,3-dichlorophenyl, 2-fluorophenyl, 2-methylphenyl, 2-trifluoromethylphenyl, or 3-bromophenyl.

9. (Original) The compound according to Claim 6, wherein n is 2.

10. (Original) The compound according to Claim 9, wherein R^3 is hydrogen, methyl, or $-C(=O)-R^5$, where R^5 is alkoxy.

11. (Previously Presented) The compound according to Claim 1, wherein R^1 is phenyl which is optionally substituted with a substituent selected from the group consisting of alkyl, halo and haloalkyl.

12. (Previously Presented) The compound according to Claim 11, wherein R^1 is phenyl, 2,3-dichlorophenyl, 2-fluorophenyl, 2-methylphenyl, 2-trifluoromethylphenyl, or 3-bromophenyl.

13. (Original) The compound according to Claim 11, wherein n is 2.

14. (Original) The compound according to Claim 13, wherein R^2 is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.

15. (Original) The compound according to Claim 14, wherein R^2 is piperazin-1-yl, 4-methylpiperazin-1-yl, 3,5-dimethylpiperazin-1-yl, N-methyl piperidin-4-yl or piperidin-4-yl.

16. (Original) The compound according to Claim 15, wherein R^3 is hydrogen, methyl or $-C(=O)-R^5$, where R^5 is alkoxy.

17. (Original) The compound according to Claim 1, wherein n is 2.

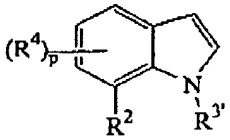
18. (Previously Presented) The compound according to Claim 17, wherein R^1 is phenyl which is optionally substituted with a substituent selected from the group consisting of alkyl, halo, haloalkyl, and a mixture thereof.

19. (Original) The compound according to Claim 18, wherein R^2 is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.

20. (Original) The compound according to Claim 19, wherein R^3 is hydrogen, methyl or $-C(=O)-R^5$, where R^5 is alkoxy.

21. (Original) The compound according to Claim 1, wherein said compound is 2-benzenesulfonyl-7-(4-methylpiperazin-1-yl)-1H-indole.

22. (Currently Amended) A method for producing a compound of claim 1, said method comprising contacting a substituted indole of the formula:



wherein $R^{3'}$ is alkyl or $-C(=O)-R^5$, and p, R^2, R^4 and R^5 are as recited in claim 1

(i) with a base to produce a deprotonated indole; and

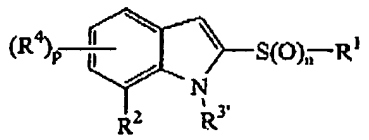
(ii) contacting the deprotonated indole with a sulfonylating agent of the formula:

$$Y-SO_2-R^1,$$

where Y is halide and R^1 is as recited in claim 1, or a disulfide agent of the formula:

$$R^1-S-S-R^1$$

to produce a 2-substituted indole of the formula:



(iii) optionally oxidizing the sulfur with an oxidizing agent; and

(iv) optionally removing the ~~protecting~~ group $R^{3'}$ to produce the **compound of claim 1 wherein R^3 is hydrogen**.

23. (Original) The method of Claim 22, wherein Y is fluorine.

24. (Original) A composition comprising:

(a) a therapeutically effective amount of a compound of Claim 1; and

(b) a pharmaceutically acceptable carrier.

25. (Currently Amended) A method for treating a **5-HT6-mediated memory disorder or Alzheimer's disease** ~~CNS disease state~~ in a subject, said method comprising administering to said subject a therapeutically effective amount of a compound of Claim 1.

26. (Canceled)

27. (Canceled)

28. (Canceled)